

USSR

UDC 621.039.548.535:669.14

MARGULOVA, T. KH., GERASIMOV, V. V., and LIPANINA, A. A.

"Steel Hydrogenation as Affected by Treatment with Trilon B"

Moscow, Atomnaya Energiya, Vol 29, No 3, Sep-Oct 70, pp 209-210

Abstract: The article describes results of a study of the effect of Trilon treatment on the hydrogenation of steel. Cylindrical specimens were saturated with hydrogen by the electrolytic method. Steels used for separating drums and steam lines (22K and 16GNM), as well as for reactor vessels were studied. Before hydrogenation some of the specimens were treated with a Trilon B solution with an initial concentration of 500 mg/kg with a pressure rise to 100 at (290° C) for 6 hours and exposure under this regime for 12 hours, and a group of 16GNM specimens were held in condensate for 500 hours at a pressure of 200 at (350° C), while some specimens were not exposed to any aqueous medium. The results indicate that periodic treatment with complexing agents improves the mechanical characteristics of hydrogenation-

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MARGULOVA, T. KH., Atomnaya Energiya, Vol 29, No 3, Sep-Oct 70,
pp 209-210

prone steels. Trilon treatment is advisable not only to increase
the general corrosion resistance of pearlitic steels, but also to
prevent intensive hydrogenation.

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USSR

UDC 620.197.1

MARGULOVA, T. KH., Doctor of Technical Sciences, BUEJSUK, L. M., Candidate of Technical Sciences, BOGATYREVA, S. V., Engineer, LIFANINA, A. A., Engineer; Moscow, Power Engineering Institute

"The Corrosion of Structural Materials in Boron-Containing Solutions That are Used for Controlling the Pump Work of Nuclear Reactors"

Moscow, Teploenergetika, No 12, 1970, pp 14-17

Abstract: The corrosion resistance of steel 1Kh18N9T, zirconium alloys with 1 and 2.5% niobium (the materials of fuel-element shells and cassettes), as well as carbon steel 20 and low-alloy vessel steel in boron-containing solutions is investigated. It is shown that the use of boric acid for "soft" control and the emergency stopping of nuclear reactors does not bring about corrosion of the structural materials. Five figures, 3 tables.

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USSR

UDC 629.78.017.2

SOKOLOV, N. I. and LIPATOV, A. V.

"Necessary Conditions of Linear System Continuity"

Tr. Mosk. Aviats. In-ta (Works of the Moscow Aviation Institute) No 240, 1972, pp 26-30 (from Referativnyy Zhurnal--Raketostroyeniye, No 5, May 73, Abstract No 5.41.148)

Abstract: Two necessary conditions were obtained for the continuity of linear systems for which the characteristic polynomials

$$a_0 z^n + a_1 z^{n-1} + \dots + a_n$$

have positive coefficients a_i . One of the conditions consists of the fact that

for a continuous system the sequence $\frac{a_2}{a_0}, \frac{a_3}{a_1}, \frac{a_4}{a_2}, \dots, \frac{a_n}{a_{n-2}}$

should be diminishing. The second condition is reduced to the following relationship of the polynomial coefficients:

$$a_1^2 - C_1 a_{i-2} a_{i+2} = 0, \quad i = 2, 4, 6, \dots, n-2,$$

where $C_1 = \frac{(n-i+2)(i+2)}{(n-i)i}$

3 bibliographic references.

USSR

LIPATOV, I. N., Physicotechnical Institute imeni A. F. Ioffe, Academy of Sciences of the USSR

"Bremsstrahlung in the Process of e^+e^- -Backward Scattering at High Energies"

Moscow, Yadernaya Fizika, Vol 14, No 2, Aug 71, pp 396-407

Abstract: The cross section of e^+e^- -backward scattering with emission of an arbitrary number of γ -quanta which are polarized in a plane is computed; an expression in gauge-invariant form, derived in previous works by the author, is used for the amplitudes of scattering. The so-called double-logarithmic approximation is used to perform the calculations. It is shown that the cross section of each individual emission of γ -quanta, the cross section being normalized to a Born cross section of elastic e^+e^- scattering, decreases exponentially as energy increases but that, nonetheless, the cross section of the emission of an arbitrary number of γ -quanta, also normalized to a Born cross section, approaches a constant value, approx 0.78. This was postulated earlier by R. P. Feynman. The difficulties that would be encountered if an attempt were made to verify these results experimentally are discussed.

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1/2 020 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--ON THE VACUUM POLE IN QUANTUM ELECTRODYNAMICS -U-
AUTHOR--(03)-FROLOV, G.V., GRIBOV, V.N., LIPATOV, L.N.
COUNTRY OF INFO--USSR
SOURCE--PHYS. LETTERS (NETHERLANDS), VOL. 31B, NO.1.P.34-5 (5 JAN. 1970)
DATE PUBLISHED--05JAN70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--QUANTUM ELECTRODYNAMICS, ASYMPTOTIC PROPERTY, SCATTERING
AMPLITUDE, APPROXIMATION CALCULATION, GAMMA SCATTERING, ELECTRON
SCATTERING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1986/0074 STEP NO--NE/0000/70/031/001/0034/0035
CIRC ACCESSION NO--AP0102164
UNCLASSIFIED

2/2 020 UNCLASSIFIED PROCESSING DATE--16OCT70
CIRC ACCESSION NO--AP0102164
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ASYMPTOTIC BEHAVIOR OF THE EE.
ENU AND NUNU SCATTERING AMPLITUDES IS DETERMINED IN THE MAIN LOGARITHMIC
APPROXIMATION. THE J PLANE SINGULARITIES IN THE CHANNEL WITH VACUUM
QUANTUM NUMBERS ARE INVESTIGATED NEAR J EQUALS 1. FACILITY:
A.F. IOFFE PHYS., TECH., INST., LENINGRAD, USSR.

UNCLASSIFIED

UDC 621.373

USSR

KATAYEV, I.G., LIPATOV, N.F., MESHKOV, A.N., ROZHKOV, I.I.

"Generator Of Nanosecond Pulse Power On Nonlinear Transmission Lines With Ferrite"

Moscow, Pribory i Tekhnika Eksperimenta, No 5, Sept-Oct 1971, pp 126-130

Abstract: The paper describes in detail the generator circuit and the construction, operation, and characteristics of a generator of nanosecond pulses for supply of injection lasers and other electron-optical devices. The power of output pulses as high as 300 kw permits operation with an unmatched load. The duration of pulses of every polarity is from 2 to 30 nanosecond. The amplitude of the current with a low-resistance load is as high as 800 a; the voltage with a capacitive load is as much as 10 kv. The generator is constructed on the principle of forming electromagnetic shock waves in a transmission line with a ferrite. Received by editors 15 March 71. 7 ref. 3 fig. 1 tab. [Gor'kiy Polytechnical Institute]

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USSR

UDC: 621.317.4:621.318.134

FOMIN, A. Ye., LIPATOV, P. V., SHCHERBINA, P. L., PRISADA, V. M.

"Multidimensional Statistical Analysis of the Pulse Parameters of Ferrite Cores"

Elektron. tekhnika. Nauchno-tekhn. sb. Ferrit. tekhn. (Electronic Technology. Scientific and Technical Collection. Ferrite Technology), 1970, vyp. 3(25), pp 66-72 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5A249)

Translation: The authors consider some aspects of multidimensional studies of the pulse parameters of ferrite cores -- amplitude of readout signals, time for magnetic reversal, and the rise time to maximum of the readout signals. A description is given of a measurement complex for these studies which consists of an AI-4096 analyzer, a U-700M automatic device for quality control of ferrite cores, and input matching devices. Measurement data are given as well as the results of computer processing of these data. It is emphasized that such studies are highly important for evaluating the quality of batches of ferrite cores, and for the development of controlled ferrite technology. Resumé.

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USSR

UDC 621.317.726(088.8)

KUZNETSOV, V. D., OSTROUSHKO, A. I., LIPATOV, V. N., MITSUR, V. I.

"Meter for Measuring the Peak Values of Single Pulses"

USSR Author's Certificate No 250304, Filed 23 Mar 66, Published 13 Jan 70 (from
RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8A534 P)

Translation: Meters which measure the peak values of pulses containing a divider, a measuring converter with negative feedback consisting of a series included amplifier and a diode-capacitive storage element with an output circuit and a terminal recorder are known. In place of these meters with low reliability and insufficient accuracy, another meter is proposed which has the following distinguishing attributes: it is equipped with a "forbidden" circuit in the feedback circuit executed from a thyatron which is connected by the anode circuit to the input and by the control grid, through a switch, with the output of the measuring converter. The output circuit of the latter is assembled from a phantatron with a Schmidt trigger connected to the screen grid.

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Conferences

UDC 006.3:541.64

USSR

LIPATOV, Yu. S.

"II Ukrainian Republican Conference on High Molecular Compounds"

Moscow, Vysokomolekulyarnyye Soyedineniya, Vol 13, No 5, May 71, pp 1220-1221

Abstract: The conference was held 1-4 December 1970 in Odessa. It was devoted to three main topics: kinetics and mechanism of the formation of high molecular compounds, physical chemistry of the polymers and modification and stabilization of polymer materials. Several papers were devoted to the use of peroxides as initiators of polymerization and production of homopolymers and block-copolymers in emulsion and in a mass [IVANCHEV, S. S., YURZHENKO, A. I., et al.]. A. I. YURZENKO discussed the mechanism, kinetics, and topochemistry of emulsion polymerization as well as the aspect of a rational control of the polymerization process by altering emulsifiers and their hydrophobic-hydrophilic balance. A series of papers by LIPATOVA, T. E., and co-workers reported on mechanism of the formation of linear polyurethanes in presence of copper acetylacetonates and anionic polymerization of oligoesteracrylates initiated electrochemically and by sodium naphthalene. VIL'SHANSKIY, V. A., ANDOR, I. A., et al. reported

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LIPATOV, Yu. S., Vysokomolekulyarnyye Soyedineniya, Vol 13, No 5, May 71, pp 1220-1221

on fine details of the mechanism of emulsion polymerization and granular polymerization, while new types of polymers of the polyurethane type were discussed by GRITSENKO, T. M., GREKOV, A. P. and SPIRIN, Yu. L. The structural studies and the melting processes of crystalline polymers were studied by NOSOV, M. P., ANOKHIN, V. V., and YUDIN, A. V., while AR'YEV, A. M., and KERCH, Yu. Yu., devoted their reports to thermal treatment of the polymers with accompanying structural changes. KARAKCHI, A. M., KACHAN, A. A., et al. reported on the use of radiation and photochemistry in polymer crosslinking, while BLOKH, G. A., OMEL'CHENKO, S. I., et al. discussed the modification and stabilization of resins and fiber glass materials. Yu. S. LIPATOV covered the problems of heterogeneous polymeric materials containing dispersive, fibrous, and other fillers, formation of polymers under heterogeneous conditions and their chemical reactions.

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- 13 -

Acc. Nr:

AP0052439

Abstracting Service:

CHEMICAL ABST. 5-70

Ref. Code:

4R0460

101211m Glass temperatures of linear polymers. Privalko
V. P.; Lipatov, Yu. S. (USSR). *Vysokomol. Soedin., Ser. B* 1970,
12(2), 102-4 (Russ). Plots of the glass temp. (T_g) of 21 linear
polymers, e.g., atactic polypropylene, poly(vinyl acetate), and
poly(propylene oxide), vs. the thermodynamic rigidity of an iso-
lated polymer chain (σ) showed that T_g is detd. primarily by the
properties of the isolated macromols., i.e., their thermodynamic
elasticity. The rectilinear dependence of the in-bulk property
(T_g) on the isolated mol. property (σ) indicated that the confor-
mations of linear polymers in the amorphous state are similar to
those in ideal solvents.

DBJR

DE.

REEL/FRAME

19821073

Acc. Nr:

AP0052525

Abstracting Service:
CHEMICAL ABST. 5-70

Ref. Code:

4R0459

✓ 101186g Effect of thermal pretreatment and crystallization conditions on structure formation in linear polyurethane. Pavlov, V. I.; Linatov, Yu. S. (Inst. Khim. Vysokomol. Soedin., Kiev, USSR). *Vysokomol. Soedin. Ser. A* 1970, 12(1), 89-94 (Russ). The size of polyurethane (I) spherulites increased with the temp. and time of I melt heating prior to crystn. High melt temps. decreased the crystn. rates. Heating I based on diethylene glycol and hexamethylene diisocyanate $\leq 170^\circ$ failed to dissolve small fragments of I. Above 170° I melts contained only mol. aggregates. The spherulite growth rates from I melts heated below or above 170° were different. CPJR ✓

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REEL/FRA
19821168

Acc. Nr:

AP0052507

Abstracting Service:

CHEMICAL ABST. 5-70

Ref. Code:

4R 0460

101605t Electron-microscopic and optical study of the sur-
faces of amorphous polymer chips. Bezruk, L. I.; Lipatov, Yu.
S.; Ivashchenko, V. K.; Lipatova, T. E.; Pasechnik, Yu. V. Inst.
Khim. Vysokomol. Soedin., Kiev, USSR. Vysokomol. Soedin.
Ser. B 1970, 12(1), 33-7 (Russ). Polyurethane rubber (I) samples
were exposed to silent elec. discharge in O and plsd. by electron
microscopy. Spherulite-like structures of 3 types appeared: hy-
perbolic, polygonal, and ellipsoidal. Other methods of sample
prepn. for electron microscopy, x-ray diffraction, and birefrin-
gence failed to reveal any signs of spherulite-like structures.
Anal. of the results showed that the spherulite-like structures
are due to inhomogenities on the I surface and not to the existence
of spherulites; I have a globular amorphous structure. CPJR

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REEL/FRAME

19821148

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Acc. Nr.

AP0048843

Abstracting Service:

CHEMICAL ABST.

Ref. Code

UR0460

90932u Distribution of density in the surface layer of amorphous polymers. Tsarev, P. K.; Baranov, V. G.; Lipatov, Yu. S. (Inst. Khim. Vysokomol. Soedin., Kiev, USSR). Vysokomol. Soedin., Ser. B 1970, 12(3), 115-17 (Russ). A method and device for studying the stratification of amorphous polymeric systems are described. Absorbance measurements of tech. poly(Me methacrylate) indicated that it had a complex surface layer. The d. of the surface layer was only very slightly less than that of the underlying mass. DBJR

REEL/FRAME
19800610

1/2 015 UNCLASSIFIED PROCESSING DATE--18 SEP70
TITLE--FORMATION OF RETICULAR POLYURETHANE BASED ON AN OLIGOMERIC MACRO
DIISOCYANATE -U-
AUTHOR-(04)-NESTEROV, A.E., LIPATOVA, T.E., IVASHCHENKO, V.R., LIPATOV,
YU.S.
COUNTRY OF INFO--USSR
SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(2) 150-3
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--POLYURETHANE RESIN, OLIGOMER, ORGANIC ISOCYANATE, MOLECULAR
WEIGHT, INTRINSIC VISCOSITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1986/0252

STEP NO--UR/0460/70/012/002/0150/0153

CIRC ACCESSION NO--AP0102302

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0102302

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POLYDISPERSITY, MOL. WT. DISTRIBUTION, INTRINSIC VISCOSITY, AND DIMENSIONS OF MACROMOLS. RESULTING FROM THE REACTION PRODUCTS OF A MACRODIISOCYANATE (I) (PREPD. FROM POLYPROPYLENE GLYCOL (MOL. WT. 2000) AND 4, 4-DIPHENYLMETHANE DIISOCYANATE) AND ETC(CH SUB2 OH; SUB3 WERE STUDIED. A SUDDEN INCREASE IN THE MOL. WT. OF I AND IN THE M SUB2-M SUBZ RATIO WAS OBSD. BEYOND SIMILAR TO 50PERCENT CONVERSION. A PLOT OF INTRINSIC VISCOSITY, M SUBW-M SUBZ, AND R PRIME2-M SUBW VS. CONVERSION (WHERE (R PRIME2) PRIMEONE HALF IS THE MEAN SQUARE RADIUS OF INERTIA, M SUBW IS THE WT. AV. MOL. WT., AND M SUBZ IS THE Z AV. MOL. WT.) SUGGESTED THAT A COMPLETELY CROSSLINKED POLYURETHANE, CONSISTING OF DISCRETE MICROBLOCKS SPARSELY BOUND BY CHEM. BONDS, WAS FORMED DURING THE LAST STAGES OF HARDENING.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--070CT70
TITLE--STUDY OF SURFACE PHENOMENA IN POLYMERS PROPERTIES OF MONOMOLECULAR
OLIGOMER LAYERS -U-
AUTHOR-(G3)-FAYNERMAN, A.YE., LIPATOV, YU.S., MAYSTRUK, V.K.

COUNTRY OF INFO--USSR

SOURCE--KULLGIDNYY ZHURNAL, 1970, VOL 32, NR 2, PP 282-287

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--MOLECULAR WEIGHT, POLYMER STRUCTURE, OLIGOMER, ETHYLENE
GLYCOL, ADIPATE, ISOTHERM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1992/1550

STEP NO--UR/0069/70/032/002/0282/0287

CIRC ACCESSION NO--AP0112544

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112544

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE COMPRESSION ISOTHERMS OF MONOMOLECULAR LAYERS OF OLIGODIETHYLENEGLYCOL ADIPATES OF VARYING MOLECULAR WEIGHT HAVE BEEN STUDIED ON DIFFERENT SUBSTRATES. ON A WATER SUBSTRATE INCREASE OF MOLECULAR WEIGHT INVOLVES CHANGES IN THE PACKING DENSITY AND CHAIN FLEXIBILITY AS WELL AS FORMATION OF MOLECULAR AGGREGATES OF SHORT CHAINS. ON SUBSTRATES WITH GREATER SURFACE ENERGIES THAN THAT OF WATER THESE AGGREGATES BREAK UP AND THE CHAIN FLEXIBILITY IN MONOLAYERS INCREASES. IN THE TEMPERATURE RANGE 15 DIVIDED BY 30DEGREESC THE STRUCTURE OF MONOLAYERS CHANGES INSIGNIFICANTLY.

UNCLASSIFIED

1/2 030 UNCLASSIFIED
TITLE--ADHESION OF POLYURETHANES AT LOW RATES OF EXFOLIATION -U-
AUTHOR--(03)-LIPATOV, YU.S., KUKSIN, A.N., SERGEYEVA, L.M.
COUNTRY OF INFO--USSR
SOURCE--FIZ. KHIM. MEKH. MATER. 1970, 5(6), 688-91
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--ADHESION, POLYURETHANE RESIN, COPOLYMER, FURAN, ETHYLENE
OXIDE, STEEL, BRASS, GLASS, PLASTIC COATING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/0768
STEP NO--UR/0369/70/005/006/0688/0691
CIRC ACCESSION NO--AP0124438
UNCLASSIFIED

PROCESSING DATE—23OCT70

UNCLASSIFIED

2/2 030

CIRC ACCESSION NO--AP0124438
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE WORK OF ADHESION OF POLYURETHANE COATINGS WAS MEASURED. A COPOLYMER OF TETRAHYDROFURAN WITH 25PERCENT ETHYLENE OXIDE AND AN ADDUCT OF TOLYLENE DIISOCYANATE WITH TRIMETHYLPROPANE OF DIFFERENT NCO-OH RATIOS WERE USED FOR THE PREPN. OF THE POLYURETHANES. SINCE DELAMINATION OF THE FILM UNDER TENSION CONTINUED UNTIL THE ADHESION FORCES EQUALLED THE TENSION IN THE DELAMINATED FILM, THE REMAINING ADHESIVE FORCES CALCULATED PER UNIT WIDTH (1 CM) WERE IDENTIFIED AS THE "EQUILIBRIUM WORK OF ADHESION." THIS VALUES, BEING INDIPENDENT OF SECONDARY FACTORS, WAS USED IN STUDYING ADHESION. THE WORK OF ADHESION INCREASED WITH THE INCREASE IN THE CROSSLINK D. OF THE POLYMER AND DECREASED DEPENDING ON THE BASE IN THE ORDER: STEEL GREATER THAN BRASS GREATER THAN DURALUMIN GREATER THAN GLASS.

FACILITY: INST. KHIM. VYSOKOMOL. SOEON, KIEV, USSR.

UNCLASSIFIED

1/2 033
TITLE--SIZES OF MACROMOLECULES AND STRUCTURE OF THE NETWORK IN CROSSLINKED
POLYURETHANES -U-
AUTHOR--(02)-PRIVALKO, V.P., LIPATOV, YU.S.
COUNTRY OF INFO--USSR
SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(4), 268-72
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--ELASTOMER, POLYURETHANE RESIN, TENSILE STRENGTH, ETHYLENE
GLYCOL, ADIPATE, ORGANIC ISOCYANATE, FLEXIBILITY, POLYETHER RESIN,
POLYESTER RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/1013

STEP NO--UR/0460/70/012/004/0268/0272

CIRC ACCESSION NO--AP0136440

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--27NOV70

2/2 033

CIRC ACCESSION NO--AP0136440
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE TENSILE STRENGTH OF ELASTOMERIC CROSSLINKED POLYURETHANES (I) (BASED ON ETHYLENE GLYCOL ADIPATE OR POLYFURIT OF MOL. WT. 1000, AND 2,4-TOLYLENE DIISOCYANATE, AND CROSSLINKED WITH 1:1 AND 1:3 DIETHYLENE GLYCOL, GLYCEROL MIXTS.) WAS MEASURED FROM MINUS 70 TO PLUS 100 DEGREES. THE DATA INTERPRETED ACCORDING TO BUECHE'S THEORY (F. BUECHE, 1964, 1965), SHOWED NO REAL STRUCTURE IN I ELASTOMERS. I PREPD. FROM POLYESTERS WERE MORE FLEXIBLE THAN THOSE PREPD. FROM POLYETHERS. VYSOKOMOL. SOEDIN., KIEV, USSR.

FACILITY: INST. KHIM.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--MOLECULAR MOTION IN POLYURETHANE SURFACE LAYERS -U-
AUTHOR--(02)-FABULYAK, F.G., LIPATOV, YU.S.
COUNTRY OF INFO--USSR
SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(4), 738-52
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--PROTON, SPIN LATTICE RELAXATION, DIELECTRIC PROPERTY,
POLYURETHANE RESIN, ETHYLENE GLYCOL, ADIPATE, POLYETHER RESIN, POLYESTER
RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/0727

STEP NO--UR/0459/70/012/004/0738/0752

CIRC ACCESSION NO--AP0136166
UNCLASSIFIED

PROCESSING DATE--04DEC70

UNCLASSIFIED

2/2 019

CIRC ACCESSION NO--AP0136166

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. PROTON SPIN LATTICE AND DIELEC. RELAXATION OF POLYURETHANES (I) (PREPD. FROM DIETHYLENE GLYCOL ADIPATE AND TOLYLENE DIISOCYANATE, CROSSLINKED POLYETHER (II) OR CROSSLINKED POLYESTER (III)) INDICATED ONLY ONE TYPE OF RELAXATION, BUT THE MOBILITY OF III SEGMENTS EXCEEDED THAT OF II SEGMENTS. A SHIFT OF RELAXATION MIN. AND DIELEC. LOSS FACTOR MAX. TOWARD HIGHER TEMPS. WAS OBSD. IN I FILLED WITH FINELY DIVIDED AEROSIL (IV). THE ACTIVATION ENERGIES OF SPIN LATTIC AND DIELEC. RELAXATIONS INCREASED IN THE SURFACE LAYERS OF I. THE DISTRIBUTION PARAMETER OF RELAXATION TIME SPECTRA (CALCD. FROM CIRCULAR K. S. AND R. H. COLE'S DIAGRAMS) SUGGESTED THAT THE RELAXATION SPECTRA WIDENED IN IV MODIFIED I. THE CHANGE IN MOL. MOBILITY AT THE INTERFACE WAS PRIMARILY DTD. BY A DECREASE IN THE NO. OF POSSIBLE CONFORMATIONS RATHER THAN BY WHETHER THE POLYMER REACTED ENERGETICALLY WITH THE SURFACE OR NOT.

FACILITY: INST. KHIM. VYSOKOMOL.

SOEDIN., KIEV, USSR.

UNCLASSIFIED

UDC 543.422.4+541.571.9+577.
26.118

USSR

SHAGIDULLIN, R. R., LIPATOVA, I. P., NURETDINOV, I. A., and
SAMARTSEVA, S. A., Institute of Organic and Physical Chemistry
Imeni A. Ye. Arbuzov, Acad. Sc. USSR, Kazan', and Kazan' Chemical-
Technological Institute Imeni S. M. Kirov

"Hydrogen Bonding with the Participation of P=Se and P=Te Groups"

Moscow, Doklady Akademii Nauk SSSR, Vol 211, No 6, Aug 73,
pp 1363-1365

Abstract: The electron donating ability of the group $P=X$ ($X=Se, Te$) was studied in the compounds of the type $R_1R_2R_3P=X$ where $R_1, R_2, R_3 = Me, Et, Bu, Ph, EtO, EtS, PhO, Me_2N, Et_2N$, and Cl (for $X = Se$), and Me, Me_2N, Et_2N (for $X = Te$), by determining IR spectral changes due to the formation of hydrogen bonds with the phenolic OH group. It has been established that both the seleno- and tellurophosphoryl groups participate in hydrogen bonding as proton acceptors, the strength of the H-bond depending on the electronic effects of the substituents on the phosphorus atom. The electron donating ability of the $P=X$ groups ($X = O, S, Se, Te$) is identical.

USSR

SHAGIDULLIN, R. R., et al., Doklady Akademii Nauk SSSR, Vol 211,
No 6, Aug 73, pp 1363-1365

media changes considerably when oxygen is replaced by sulfur, but
such a change is very small when sulfur is replaced by Se or Te.

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USSR

UDC 541.57:546.11:547.1'118

SHAGIDULLIN, R. R., LIPATOVA, I. P., VACHUGOVA, L. I., CHERKASOV, R. A., and KHAYRUTDINOVA, F. KH., Institute of Organic and Physical Chemistry Imeni A. Ye. Arbuzov, Acad. Sc. USSR, and Kazan State University Imeni V. I. Ul'yanov-Lenin

"Hydrogen Bonding in Dithio Acids of the Pentavalent Phosphorus"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 4, Apr 72, pp 847-851

Abstract: IR spectra of a series of liquid phosphinic, phosphonic and phosphoric dithio acids and their solutions in CCl_4 were studied in temperature range 253-293°K. In pure liquids and in concentrated CCl_4 solutions dimers were found to form via the hydrogen bonding. The SH group acted as the proton donor, the acceptor being the thiono sulfur atom in the phosphinic acid, and the oxygen atom of the ether group in phosphonic and phosphoric acids. The hydrogen bonding between the SH group and thiophosphoryl sulfur in the phosphinic acid is stronger than the SH hydrogen bonding with the oxygen of the phosphonic and phosphoric acid derivatives, or of the dioxane. In dilute CCl_4 solutions the noncyclic dithiophosphonic and phosphoric acids exist in form of two rotational isomers; the cyclic and the phosphinic compounds exist in a single form. The stabilization of the isomers is due evidently to intramolecular H-bonding.

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USSR

UDC 542.91:661.718.1

PUDOVIK, N., YELISEYENKOV, V. N., SERKINA, N. A., and LIPATOVA, I. P.
Institute of Organic and Physical Chemistry imeni A. Ye. Arbuzov, Academy of
Sciences USSR

"Reactions of Amidophosphites with Alkylmethylphosphonic and Thiophosphonic
Acids"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 5, 1971,
pp 1039-1044

Abstract: The action of alkylmethylphosphonic and alkylmethylthiophosphonic
acids on bis(diethylamido)alkylphosphites and tris(diethylamido)phosphite was
investigated. The reactions led to mixed anhydrides of methylphosphonic
(thiophosphonic) and amidophosphorous acids. The amount of diethylamine
(80-95 percent) formed in these reactions corresponds to the amount of mixed
anhydride (70-85 percent) formed, showing the lack of side reactions. The
diethylamine formed can react both with the anhydride formed, as well as form
a salt with the starting acid, $\text{CH}_3(\text{HO})\text{P}(\text{X})\text{OH} \cdot \text{HNEt}_2$, partially removing it from
the reaction. The reactions can occur both in an organic inert solvent, as
well as in its absence, and the yield of reaction products is not affected by
the order in which the starting reagents (acid to phosphite or vice versa) are
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PUDOVIK, N., et al., Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya,
No 5, 1971, pp 1039-1044

added. To increase the yields of anhydrides, the reagents must be mixed in the cold and after removal of the solvent the reaction mixtures must be heated at 10-50 mm and 60-120° until diethylamine is no longer formed. The mixed anhydrides obtained are saponified with water, forming the diethylammonium salt of phosphorous acid; they add sulfur with evolution of heat, forming pyrophosphonatothiophosphates.

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USSR

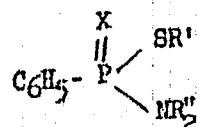
UDC 543.422.4:661.718.1

SHAGIDULLIN, R. R. and ~~LITATOVA, I. P.~~ Institute of Organic and Physical Chemistry imeni A. Ye. Arbuzov, Academy of Sciences USSR

"Infrared Spectra and Structure of Certain Organo-thiophosphorus Compounds"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 5, 1971, pp 1024-1027

Abstract: Identification of bands associated with P-S vibrations and quantitative data on the intensities of these bands were obtained for several new thio-organophosphorus compounds of the type:



X = O, Se, S R' = C₂H₅, i- and n-C₃H₇, i and n-C₄H₉
R'' = C₂H₅, n-C₃H₇

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USSR

SHAGIDULLIN, R. R. and LIPATOVA, I. P., Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 5, 1971, pp 1024-1027.

Wave numbers of band maxima assigned to the vibrations of P-S, P=S, and P=Se bonds are tabulated, along with integral intensities (A_{int}) of the doublet P-S bands. It was found that the frequency and integral intensity of vibrations of the P-S bond are sensitive to substituents at the phosphorus atom: for compounds of the type given above, with alkyl radical instead of phenyl, $\nu_{P-S} = 510-540 \text{ cm}^{-1}$. Introduction of an aryl radical increases this frequency to 557-578 cm^{-1} . Several rotational isomers exist among the compounds studied. Spectra of certain compounds recorded in the temperature range from $+30$ to -130° and in solvents of different polarity revealed the existence of rotational isomers. The energy change ΔE of rotational isomers were calculated from measurements of infrared spectra at different temperatures. The infrared spectra were recorded on the UR-10 double beams spectrometer in the $400-4000 \text{ cm}^{-1}$ range.

2/2

- 30 -

UDC: 547.241+661.725

USSR

GRISHINA, O. N., KOSOVA, L. M., ~~LIBATOVA, I. P.~~, and SHAGIDULLIN, R. R.,
Institute of Organic and Physical Chemistry imeni A. Ye. Arbuzov, Kazan',
Academy of Sciences USSR

"Alkylthiophosphine Sulfides. 9. Synthesis of Pentaerythrityl 0,0,0,0-Tetrakis (Alkylthiophosphonates) and Their Derivatives"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 1, Jan 70, pp 66-69

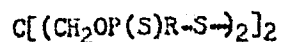
Abstract: A series of dithiophosphonate derivatives, previously unknown, were synthesized in the pursuit of investigation of alkylthiophosphine sulfides (I). Four partial esters, pentaerythrityl 0,0,0,0-tetrakis(alkylthiophosphonates) (II), were prepared in 100% yields by mixing I with pentaerythrityl in anhydrous dioxane at 90°. II were clear viscous products. Dropping triethylamine slowly into a mixture of I and pentaerythrityl in dioxane at room temperature, then heating the mixture to 70° gave corresponding quaternary triethylammonium salts of II (III) (yields 92-97%), clear viscous substances which crystallized on standing. Adding slowly ethyl iodide or ethyl chloroacetate to III in dioxane at 70-80° gave after three hours 65-89% yields of pentaerythrityl 0,0,0,0-tetrakis (S-dialkylthiophosphonates), extremely viscous substances which crystallized on standing. Similarly III in dioxane

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GRISHINA, O. N., et al, Zhurnal Obshchey Khimii, Vol 40, No 1, Jan 70, pp 66-69

solution reacted with aqueous iodine at room temperature to give 78.8-94.3% yields of disulfides



where R is butyl, cyclohexyl, or C_6H_{13} . The disulfides IV were crystalline products, identified by their melting points. Shaking II, where alkyl is butyl or cyclohexyl, with aqueous nickel sulfate in equimolar amounts gave 100% yields of corresponding nickel salts, gray-greenish powders melting at 145-147° and 230-33°, respectively.

2/2

1/2 024 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--SULFIDES OF ALKYLTHIONOPHOSPHINES. IX. SYNTHESIS OF
PENTAERYTHRITOL, O, O, O, O, TETRAKIS, ALKYLDITHIOPHOSPHONATES, AND THEIR
AUTHOR--(04)--GRISHINA, O.N., KOSOVA, L.M., LIPATOVA, I.P., SHAGIDULLIN,
R.R.
COUNTRY OF INFO--USSR
SOURCE--ZH. OBSHCH. KHIM. 1970, 40(1), 66-9
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, HETEROCYCLIC OXYGEN COMPOUND, IR SPECTRUM,
ORGANONICKEL COMPOUND, PHOSPHATE ESTER, HETEROCYCLIC SULFUR COMPOUND,
HETEROCYCLIC PHOSPHOROUS COMPOUND, THIOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1992/1739

STEP NO--UR/0079/70/040/001/0066/0069

CIRC ACCESSION NO--AP0112727

UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0112727

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATING 5 G (MEETCHPS SUB2) SUB2 WITH 2.24 G C(CH SUB2 OH) SUB4 IN DRY DIOXANE 1 HR AT 90DEGREES GAVE 100PERCENT VISCOUS C(CH SUB2 OP(S)-(SHIR) SUB4 (I) IR EQUALS MEETCH), N PRIME20 SUBD 1.5630. SIMILARLY WERE PREPD. THE ANALOGS WITH: SHOWN ON MICROFICHE. IR SPECTRA ARE REPORTED. FACILITY: INST. ORG. FIZ. KHIM. IM. ARBUZOVA, KAZAN, JSSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--PROPERTIES OF PYRIDINECARBOXYLIC ACIDS HAVING CARBOXYL AND CARBONYL
GROUPS IN POSITIONS 2 AND 3 -U-
AUTHOR--(04)--YURKINA, L.P., RUSYANOVA, N.D., LIPATOVA, L.F., KONDRATOV,
V.K.
COUNTRY OF INFO--USSR
SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (3), 390-3
DATE PUBLISHED--70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PYRIDINE, CARBOXYLIC ACID, TITRATION, MOLECULAR STRUCTURE, IR
SPECTRUM, UV SPECTRUM, CARBOXYL RADICAL, CARBONYL RADICAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FAME--2000/0684

STEP NO--UR/0409/70/000/003/0390/0393

CIRC ACCESSION NO--AP0124356

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/2 022

CIRC ACCESSION NO--AP0124356

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE TITRM. OF THE TITLE COMPD. IN

ANHYD. SOLVENTS GAVE 1 OR 2 MAX. AT MINUS 100 TO MINUS 250 MV AND MINUS

300 TO MINUS 400 MV, WHICH ARE CHARACTERISTIC OF THE MOL. STRUCTURE.

THE CHARACTERISTICS OF THE IR AND UV SPECTRA OF THE TITLE COMPS. ARE

DISCUSSED.

SVERDLOVSK, USSR.

FACILITY: VOST. NAUCH. ISSLED. NGLEKHIM. INST.,

UNCLASSIFIED

Acc. Nr:

AP0041510

Abstracting Service:

CHEMICAL ABST.

Ref. Code:

4170 URC366

89931m Chemistry of free radicals of the hydrazine series.

IX. Synthesis and properties of some hydrazinoformazans.

Rybakova, Yu. A.; Lipatova, L. E.; Matevosyan, R. O. (Ural.

Lesotekh. Inst., Sverdlovsk, USSR). Zh. Org. Khim. 1970,

6(1), 182-4 (Russ.). The condensation of PhCH:NNH_2 with

$\text{Ph}_2\text{NNHC}_6\text{H}(\text{NO}_2)_3\text{Cl-2,4,6,3}$ gave $\text{Ph}_2\text{NNHC}_6\text{H}(\text{NO}_2)_3\text{NHN:}$

CNPh-2,4,6,3 (I). The addn. of $4\text{-XC}_6\text{H}_4\text{N}_2\text{Cl}$ (X = H or Cl)

in aq. HCl-NaNO_2 mixt. to cooled I gave a ppt. of $\text{Ph}_2\text{NNHC}_6\text{H}$

$(\text{NO}_2)_3(\text{NHN:CPhN:NC}_6\text{H}_4\text{X-4)-2,4,6,3}$ (II). Uv and ir spec-

tra of II are compared with the spectra of the related formazans.

CPJR

REEL/FRAME

19751378

USSR

UDC 577.1:615.7/9

LIPATOVA, T. E., and LOOS, S. M.

"The Effect of the Structure of Reticular Polyurethans on Their Resolution in an Organism"

Sintez i fiz.-khimiya polimerov. Resp. mezhved. sb (Synthesis and Physical Chemistry of Polymers: Republic Inter-Agency Collection of Works), 1973, Vyp 11, pp 95-98 (from Biologicheskaya Khimiya, No 15, Aug 73, Abstract No 15F2069)

Translation: The authors study the rate of destruction and resolution of a polymer in the organisms of rabbits using specimens obtained from various glycol components and various binders. The polyurethans of various structure resolved in the organism at various rates. The destruction, resolution of the polymer, was characterized by the value of the tangent of the angle of inclination to the axis of the abscissas of the straight line set up within the coordinates: suture density-implantation time. The highest value $\text{tga}=0.188$ corresponds to the LTM-F type polyurethan which was obtained on the basis of poly-tetramethyleneglycol. It is shown that the chemical composition, nature of the glycol component and of the binder, along with the wettability of the polymer surface and other factors affect the rate of polymer resolution.

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Polymers and Polymerization

USSR

UDC 541.64:678.664

LIPATOVA, T. E., LOOS, S. M., and MOMBUZHAY, M. M., Institute of the Chemistry of High-Molecular Compounds, Academy of Sciences of the Ukrainian SSR

"Interaction of Polyester Urethanes With Physiologically Active Media"

Moscow, Vysokomolekulyarnyye Soyedineniya, Vol 12, Series A, No 9, Sep 70, pp 2,051-2,056

Abstract: Polyester urethane film nets with and without a filler were studied to determine the feasibility of using these materials in gastroenteritic implants. The films were based on polydiethylene glycol adipate, toluylene diisocyanate, hexamethylene diisocyanate or diphenylmethane diisocyanate. The cross linking agent was trimethylolpropane, and the filler was ordinary sugar or starch in quantities of 20% by weight. It was found that after subcutaneous implantation of polyester urethane, as well as after standing in gastric juice for three months, destruction of the material begins, the mechanism of destruction being the same in both instances: dissociation of both the urethane group and the ester bonds. Pepsin is absorbed by the surface of the implant, resulting in a loss of activity of the enzyme solution. At the same time, it is shown that pepsin can be desorbed from the polyester urethane

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USSR

LIPATOVA, T. E., et al, Vysokomolekulyarnyye Soyedineniya, Vol 12, Series A,
No 9, Sep 70, pp 2,051-2,056

surface under certain conditions. Specimens are more rapidly "dissolved" in
physiologically active media if sugar is introduced as a filler in the im-
plant.

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Acc. Nr:

AP0052507

Abstracting Service:

CHEMICAL ABST. 5-79

Ref. Code:

4P0460

101605t Electron-microscopic and optical study of the surfaces of amorphous polymer chips. Bezruk, L. I.; Lipatov, Yu. S.; Ivashchenko, V. K.; Linatova, T. E.; Pasechnik, Yu. V. (Inst. Khim. Vysokomol. Soedin., Kiev, USSR). Vysokomol. Soedin., Ser. B 1970, 12(1), 35-7 (Russ). Polyurethane rubber (I) samples were exposed to silent elec. discharge in O and obsd. by electron microscopy. Spherulite-like structures of 3 types appeared: hyperbolic, polygonal, and ellipsoidal. Other methods of sample prepr. for electron microscopy, x-ray diffraction, and birefringence failed to reveal any signs of spherulite-like structures. Anal. of the results showed that the spherulite-like structures are due to inhomogenities on the I surface and not to the existence of spherulites; I have a globular amorphous structure. CPJR: 1

REEL/FRAME

19821148

Acc. Nr:

AP0049662

Abstracting Service:
CHEMICAL ABST. 5170

Ref. Code:

4R0079

96041z Polarographic study of aliphatic diisocyanates. Shapoval, G. S.; Lipatova, T. E.; Zhabenko, V. A.; Shepilina, L. S.; Morozov, M. A.; Laputin, M. A. (Inst. Khim. Vysokomol. Soedin., Kiev, USSR). *Zh. Obshch. Khim.* 1970, 40(1), 25-8 (Russ). Polarographic data were reported for $(\text{CH}_2)_n(\text{NCO})_2$ with $n = 4, 6, 7, 8, 9, 10$. The half-wave potential showed a relation to the above structure by gradual extinction of the mutual inductive effect of the NCO groups as the value of n increased. These potential values were indicative of the overall reactivity of the diisocyanates in such reactions as polyurethane formation and hence represent useful industrial value. The following half-wave potentials were reported (n, V given): 4, 1.93; 5, 2.12; 6, 2.18; 7, 2.23; 8, 2.235; 9, 2.24; and 10, 2.25. The measurements were made relative to the Hg anode by using AcNMe, solvent and Et₃NI electrode at 25°. G. M. Kosolapoff J

I 3

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REEL/FRAME
19801561

1/2 015 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--FORMATION OF RETICULAR POLYURETHANE BASED ON AN OLIGOMERIC MACRO
DIISOCYANATE -U-
AUTHOR-(04)-NESTEROV, A.E., LIPATOVA, T.E., IVASHCHENKO, V.R., LIPATOV,
YU.S.
COUNTRY OF INFO--USSR
SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(2) 150-3
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, MATERIALS
TOPIC TAGS--POLYURETHANE RESIN, OLIGOMER, ORGANIC ISOCYANATE, MOLECULAR
WEIGHT, INTRINSIC VISCOSITY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1986/0252 STEP NO--UR/0460/70/012/002/0150/0153
CIRC ACCESSION NO--AP0102302
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0102302

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POLYDISPERSITY, MOL. WT. DISTRIBUTION, INTRINSIC VISCOSITY, AND DIMENSIONS OF MACROMOLS. RESULTING FROM THE REACTION PRODUCTS OF A MACRODIISOCYANATE (I) (PREPD. FROM POLYPROPYLENE GLYCOL (MOL. WT. 2000) AND 4, 4-DIPHENYLMETHANE DIISOCYANATE) AND ETC(CH SUB2 OH) SUB3 WERE STUDIED. A SUDDEN INCREASE IN THE MOL. WT. OF I AND IN THE M SUB2-M SUBZ RATIO WAS OBSD. BEYOND SIMILAR TO 50PERCENT CONVERSION. A PLOT OF INTRINSIC VISCOSITY, M SUBW-M SUBZ, AND R PRIME2-M SUBW VS. CONVERSION (WHERE (R PRIME2) PRIMEONE HALF IS THE MEAN SQUARE RADIUS OF INERTIA, M SUBW IS THE WT. AV. MOL. WT., AND M SUBZ IS THE Z AV. MOL. WT.) SUGGESTED THAT A COMPLETELY CROSSLINKED POLYURETHANE, CONSISTING OF DISCRETE MICROBLOCKS SPARSELY BOUND BY CHEM. BONDS, WAS FORMED DURING THE LAST STAGES OF HARDENING.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--MECHANISM OF URETHANE FORMATION THROUGH A COMPLEX OF CATALYST AND
REAGENTS -U-
AUTHOR--(02)-LIPATOVA, T.E., NIZELSKIY, YU.N.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(4), 880-3
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--UV SPECTRUM, POLYURETHANE RESIN, COMPLEX COMPOUND, COPPER
COMPLEX, METHANOL, CARBAMATE, CHEMICAL REACTION MECHANISM, KINETIC
EQUATION, CALCULATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1992/2010

STEP NO--UR/0020/70/190/004/0880/0883

CIRC ACCESSION NO--AT0112965

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AT0112965

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTS OF CU BIS(ET ACETOACETATE) (I) ON THE REACTION OF PHNCO WITH MEOH IN CCL SUB4 WERE STUDIED BY DILATOMETRY AND SPECTROPHOTOMETRY. UV SPECTRA AT 270-310 M MU SUGGESTED THAT A TERNARY PHNCO-MEOH-I SYSTEM MAY HAVE FORMED A COMPLEX IN WHICH PHNCO WAS COORDINATED TO CU PRIME2POSITIVE AND MEOH TO THE CHELATE RING. A KINETIC EQUATION, WHICH ACCOUNTED FOR THE FORMATION OF THE TERNARY COMPLEX, WAS DERIVED. THE REACTION CONST. OF URETHANE FORMATION WAS CALCD. FROM THE EQUATION. AN ALTERNATIVE REACTION MECHANISM, INVOLVING A BINARY COMPLEX (WHENEVER AN EXCESS OF ONE OF THE REAGENTS WAS PRESENT), WAS ALSO PROPOSED. FACILITY: INST. KHIM, VYSOKOMOL, SOEDIN., KIEV, USSR.

1/2 015 UNCLASSIFIED PROCESSING DATE—30OCT71
TITLE—MECHANISM OF POLYURETHANE SYNTHESIS IN THE PRESENCE OF DIBUTYLTIN
DILAURATE —U—
AUTHOR—(04)—LIPATOVA, T.E., BAKALO, L.A., SIROTINSKAYA, A.L., LOPATINA,
V.S.
COUNTRY OF INFO—USSR
SOURCE—VYSOKOMOL. SOEDIN., SER. A 1970, 12(4), 911-16
DATE PUBLISHED—70

SUBJECT AREAS—MATERIALS, CHEMISTRY

TOPIC TAGS—POLYURETHANE RESIN, POLYCONDENSATION, ORGANOTIN COMPOUND,
GLYCOL, ISOCYANATE, COMPLEX COMPOUND, ORGANIC SYNTHESIS

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS—UNCLASSIFIED
PROXY REEL/FRAE—2000/0676

STEP NO—UR/0459/70/012/004/0911/0916

CIRC ACCESSION NO—AP0124348

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE—30OCT7

CIRC ACCESSION NO--AP0124348

ABSTRACT/EXTRACT—(U) GP-0- ABSTRACT. THE POLYCONDENSATION OF OCNICH
SUB2)SUB6 NCO WITH HOICH SUB2 CH SUB2 O)SUB2 H IN THE PRESENCE OF BU
SUB2 SN DILAUATE (I) PROCEEDS AT A CONST. RATE LESS THAN OR EQUAL TO
70PERCENT CCNVERSION, I.E., IT IS INDEPENDENT OF THE MONOMER CONC. NO
SIDE PRODUCTS ARE PRODUCED AND POLYURETHANES EITHER HAVE NO EFFECT OR
RETARD THE REACTION. THE REACTION RATE INCREASES WITH I CONC. A
REACTION MECHANISM IS PROPOSED INVOLVING THE FORMATION OF A GLYCOL
DIISOCYANATE I COMPLEX. FACILITY: INST. KHIM. VYSOKOMOL.
SOEDIN., KIEV, USSR.

UNCLASSIFIED

UDC 543.544.084.8

USSR

SOKOLIN, G. F., LULOVA, N. I., LIPAVSKIY, V. N., MERKULOV, V. D.

"Selection of Evaporator Temperature During Dosing of Liquid Samples in an Industrial Chromatograph"

Avtomatiz. i Kontrol'noizmerit. Pribory. Nauch.-Tekhn. Sb. [Automation and Testing and Measurement Devices. Scientific-Technical Collection], 1972, No 12, pp 22-24 (Translated from Referativnyy Zhurnal Metrologiya i Izmeritel'naya Tekhnika, No 12, 1972, Abstract No 12.32.1025, by V. S. K.).

Translation: The most commonly used liquid sample dosing devices in industrial chromatographs are those in which the specimen is evaporated in a stream of carrier gas fed into the column, and the beginning of evaporation coincides with the beginning of analysis. Results are presented from experimental studies of the influence of evaporator temperature on the effectiveness of separation and the height of peaks of difficult-to-separate mixtures with boiling points of 135 to 145° C. It is demonstrated that the selection of the optimal evaporator temperature allows the effectiveness of the column to be increased significantly; the evaporator temperature should be 1.5-2 times the mean boiling point of the components of the mixture; if the optimal evaporator temperature causes thermal destruction of the specimen, dosing

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USSR

Sokolin, G. F., Lulova, N. I., Lipavskiy, V. N., Merkulov, V. D.,
Avtomatiz. i Kontrol'noizmerit. Pribory. Nauch.-Tekhn. Sb., No 12, pp 22-24.

devices with preliminary evaporation of the specimen should be used; the
accuracy of maintenance of the optimal evaporator temperature should be 0.5
to 1° C. 2 figures, 5 biblio. refs.

- 133 -

2/2

UDC 616.981.455-036.21(571.62)

USSR

BUSOYEDOVA, N. M., ANTIP'YEVA, O. A., LIPAYEV, V. M., KOZLOVSKAYA, O. L.,
CHERNYKH, P. A., FEOKISTOV, A. Z., GRIGOROV, V. I., CHIPANIN, V. L., and
KHAMAGANOV, S. A., Khabarovsk Anti plague Station

"Characteristics of Natural Foci of Tularemia in Khabarovskiy Krai"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, Apr 71,
pp 26-31

Abstract: A study conducted in the southern part of Khabarovskiy Krai indicated that natural foci of tularemia in forested and agricultural areas are different from those found in other parts of the USSR, because *Arvicola terrestris* and the common vole (*Microtus arvalis*) are absent, and hares and house mice are not numerous. Muskrats were found at only one focus. In forested regions the principal host is the large-toothed redbacked vole (*Clethrionomys rufocanus*), while the long-time reservoir and vectors are *I. peromyscus* and *H. concinna* ticks. Forest and field mice and the Siberian chipmunk were also infected. In agricultural regions the hosts are the northern redbacked and Far-Eastern vole (*Clethrionomys rutilus*; *Microtus fortis*), while *D. silvarum* and *H. concinna* ticks constitute the reservoir and vectors. A low epizootic level and still lower epidemic activity were typical for

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USSR

BUSOYEDOVA, N. M., et al., Zhurnal Mikrobiologii, Epidemiologii i Imunobiologii, Vol 48, No 4, Apr 71, pp 26-31

tularemia foci in Khabarovskiy Kray in the vicinity of the Amur River. The low rate of infection of human beings was due to the absence or small numbers of classical hosts (*Arvicola terrestris*, common vole, and hares) with which human beings may come into contact, the absence of active and widespread epizootics, and the predominance in agricultural areas of a rodent of the secondary host group (field mouse). Of seven cases of tularemia recorded, five were of the bubonic form. In one instance the source of infection was water containing *P. tularensis*, and in another instance the infection was apparently due to introduction of the agent into an eye by hands soiled with rodent feces. Testing of the population at known tularemia foci with tularin resulted in a positive allergic reaction in 1.2-2.5% of cases. The agglutination reaction was positive in 2.5-5.8%, and the passive hemagglutination reaction in 3.3-9.7% of cases. The data reported were obtained in an investigation conducted during 1956-1968.

2/2

UDC: 8.74

USSR

LIPAYEV, V. V. and KOLIN, K. K.

"The Makeup of Operations and the Statistics of Their Use in Digital Computer Control Programs"

Moscow, V sb. Tsifr. vychisl. tekhnika i programmir. (Digital Computer Techniques and Programming--collection of works) "Sov. Radio," No 7, 1972, pp 120-126 (from RZh--Matematika, No 8, 1972, Abstract No SV630)

Translation: Results are given of the statistical analysis of the makeup of operations in the programs of four digital computers used in complex systems of automated object control indicating the complex branching of the programs and the preponderance of logic operations over arithmetic. Recommendations are made for the use of special commands in digital computers of this type for performing operations with part of a word and operations with constants. Conclusions are drawn concerning the advantages of using commands in controlling digital computer systems designed specially for solving information-logic problems. Authors' abstract

USSR

UDC: 8.74

LIPAYEV, V. V., KOLIN, K. K.

"Concerning the Make-up of Operations and the Statistics of Using Them in Digital Control Computer Programs"

V sb. Tsifr. vychisl. tekhnika i programmir. (Digital Computer Technology and Programming--collection of works), vyp. 7, Moscow, "Sov. radio", 1972, pp 120-126 (from RZh-Kibernetika, No 8, Aug 72, Abstract No 8V630)

Translation: The paper gives the results of statistical analysis of the make-up of operations in the programs of four computers used in complex systems of automated control of objects. These results show the appreciable branchedness of the programs and the predominance of logic operations over arithmetic operations. Recommendations are made on using a special class of commands in digital computers to execute operations with part of a word and operations with constants. It is concluded that systems of commands specifically directed toward solving information-logic problems should be used in digital control computers. Authors' abstract.

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USSR

UDC 681.142.1

LIPAYEV, V. V., KOLIN, K. K., SEREBROVSKIY, L. A.

"Control Computer Software"

Matematicheskoye Obespecheniye Upravlyayushchikh TsVM, Moscow, Sovetskaya
Radio Press, 1972, 528 pp

Translation of Annotation: This monograph analyzes the main problems involved in the development of general software for digital computers used in automated control systems in real-time applications. The software for technological processes of planning algorithms and programs of control computers (programming, debugging, production of documentation) is studied, as well as the software for the organization of the computer process as the computer functions in the control system.

Considerable attention is given to problems and the structure of software systems for control computers, as well as methods and criteria for evaluating their effectiveness. A typical structure of an operational system, its functioning modes, and the algorithms of the main programs organizing the computational process are studied. Queueing theory methods are used to study various computation disciplines with unlimited waiting of requests in line or with losses of requests (messages) in the limited buffer memory of the computer.

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USSR

Lifayev, V. V., Kolin, K. K., Serebrovskiy, L. A., Matematicheskoye Obespecheniye Upravlyayushchikh TsVM, Moscow, Sovetskoye Radio Press, 1972, 528 pp.

Problems and methods of automation of the process of programming for control computers, programming languages, and translation and testing algorithms for inter-related large-volume programs are studied. A typical structure of a system for automation of programming and output of technical documentation on algorithms and programs is presented. The basic problems of automation of debugging of algorithms and programs for control computers and the structure and technological plan for an automated debugging system are analyzed.

The book is designed principally for scientific workers and engineers in the area of investigation and planning of the software of digital control computers. It can be used as a software course text for teachers and students in the higher levels of colleges of the corresponding specialties. 156 figures, 2 tables, 102 biblio. refs.

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USSR

UDC: 8.74

LIPAYEV, V. V., KOLIN, K. K., SHEREBROVSKIY, L. A.

"Software for Digital Control Computers"

Matematicheskoye obespecheniye upravlyayushchikh TsVM (cf. English above),
Moscow, "Sov. radio", 1972, 528 pp, ill. 2 r. 10 k. (from RZh-Kibernetika,
No 6, Jun 72, Abstract No 6V525 K)

Translation: The paper deals with the basic problems of developing general software for digital computers used in systems of automated control of objects in real time. Consideration is given to software facilities of technological processes for planning algorithms and programs for digital control computers (programming, debugging, obtaining documentation), as well as to software for organizing the computational process in the operation of digital computers in a control system. Considerable attention is given to the goals and structure of synthesis of software systems for digital control computers, and also to methods and criteria for evaluating their effectiveness. Consideration is given to the standard structure of an operational system, operating conditions, and algorithms of basic programs of organization of the computational process. Methods of queuing theory are

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USSR

LIPAYEV, V. V. et al., Matematicheskoye obespecheniye upravlyayushchikh TsVM, Moscow, "Sov. radio", 1972

used to study the various disciplines of monitoring computations in the case of unlimited waiting of customers in a queue and with loss of customers (messages) in a limited buffer memory of a digital computer. Problems and methods of automating the process of programming for digital control computers, programming languages, and also algorithms of translation and monitoring of mutually related large-volume programs are considered. A standard structure is presented for the system of automating programming and output of technical documentation for algorithms and programs. An analysis is made of the basic problems of automating debugging of algorithms and programs for digital control computers, the structure and circuitry of an automated debugging system.

USSR

UDC: 681.3.06:51

LIPAYEV, V. V.

"Flow Control of Algorithms in Digital Control Computers With a Limited Buffer Memory"

V sb. Nauch. i prakt. probl. bol'shikh sistem. Sekts. Bol'shiye sistemy. Teoriya, metodol., modelir. (Scientific and Practical Problems of Large Systems--collection of works. Large Systems Section. Theory, Methodology, Modeling), Moscow, "Nauka", 1971, pp 168-185 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V952)

Translation: The paper deals with modifications of algorithms for organizing interaction between programs in digital control computers operating in real time in complex systems. Expressions are given which make it possible to evaluate the effectiveness of loss of messages as a consequence of overflow of the buffer memory in certain disciplines of its priority and non-priority use. Recommendations are given on evaluating the use of priorities as a function of the characteristics of flow and queuing of the reports of different kinds of subscribers in the case of a limited buffer memory. Author's abstract.

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USSR

UDC 681.3.06:51

LIPAYEV, V. V.

"Comparative Characteristics of Types of Supervisory Program Operation Over Algorithms in Digital Control Computers with Limited Buffer Memory"

Tsifr. Vychisl. Tekhnika i Programmir. [Digital Computer Equipment and Programming -- Collection of Works], No 6, Moscow, Sovetskoye Radio Press, 1971, pp 97-106, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V616 by the author).

Translation: The probability is studied of losing requests for two priority and one non-priority disciplines of supervision of computations in digital control computers depending on the volume of buffer memory, on the general load of the system, on the relationships of loads of requests of the two types and on the relationships of processing times. It is demonstrated that priority servicing disciplines should be used with relationships of request servicing times less than the ratio of the volume of memory to the mean length of a message. The basic characteristics of non-priority and priority disciplines are presented for the range of change of parameters most typical for digital control computers operating with random flows of requests in real time.

USSR

UDC: 681.3

LIPAYEV, V. V., BOCHAROV, P. P.

"Probability of Message Loss in the Buffer Memory of Digital Control Computers in the Case of Poisson Input Flow"

V sb. Tsifr. vychisl. tekhnika i programmir. (Digital Computer Technology and Programming--collection of works), vyp. 6, Moscow, "Gov. radio", 1971, pp 106-111 (from RZh-Kibernetika, No 7, Jul 71, Abstract No 7V695)

Translation: A digital control computer with limited buffer memory for storing messages entering at random moments of time is treated as a single-channel queueing system. A recurrent algorithm for determining the probability of message loss in the case of memory overflow is proposed for cases of constant message processing time and random message flow distributed by Erlangian law. A simple expression which closely approximates the exact values of the probability of message loss is given for engineering calculations. The results can be used to determine the buffer memory volume, assigning a message loss probability under fairly typical conditions of message processing time. Authors' abstract.

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Heat Treatment

USSR

UDC 669.018.24:621.789.3:620.183

KIDIN, I. N., LIPCHIN, T. N., and MARSHALKIN, A. N., Moscow Institute of Steel and Alloys

"Annealing of ShKh15 Steel by the Method of Cyclic Electrothermal Treatment"

Moscow, IVUZ Chernaya Metallurgiya, No 4, 1970, pp 151-154

Translation: Before mechanical treatment and hardening, ball-bearing steels are subjected to prolonged annealing into divorced pearlite. A cyclic electrothermal treatment method of annealing is presented which reduces treatment time and enhances the possibilities of automation. It involves multiple quick heating into the austenitic region with intermediate decomposition in the pearlite region. After five cycles a structure of grained carbide with desired hardness is obtained in ShKh15 steel. The dependence of the time of the incubation period and the time of conclusion of transformation on the temperature of austenization and isothermal holding at various rates of heating (deg/sec) is shown.

Mechanical Properties

UDC: 621.746.58-

USSR

LIPCHIN, T. N., NIKULIN, L. V., LOMONOSOV, Yu. M., Perm' Polytechnic Institute

"Hardening of Alloys in Pressure Die Casting"

Moscow, Izvestiya VUZov: Chernaya Metallurgiya, No 11, 1972, pp 161-163

Abstract: The authors investigate the hardening mechanism responsible for the high mechanical properties which are attained without heat treatment when the pressure die casting method is used for making parts. M15 magnesium alloy specimens cast in a sand mold, a chill mold and by pressure die casting were studied for mechanical properties, density, grain size, microstructure, dislocation density -- characteristics which can have an appreciable effect on the strength properties of alloys. The strength properties of specimens made by pressure die casting exceeded those of chill-mold specimens by a factor of 1.4, with a corresponding figure of 2 for die-cast specimens over sand-mold specimens. The mechanism responsible for hardening of alloys during pressure die casting involves high cooling rates and application of pressure during the crystallization process. These conditions of solidification result in a sharp reduction in grain size (by a factor of 10 as compared with chill-mold

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USSR

LIPCHIN, T. N. et al., Izvestiya VUZov: Chernaya Metallurgiya, No 11, 1972, pp 161-163

casting, and by a factor of 20 as compared with sand-mold casting). These conditions also increase the dislocation density by nearly an order of magnitude as compared with sand-mold casting. All three casting methods gave the same density. The nonequilibrium conditions obtaining during pressure die casting result in slight supersaturation of the solid solution, which makes heat-treat hardening ineffective.

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USSR

UDC 576.31

GOTLIB, V. Ya., PELEVINA, I. I., AFANAS'YEV, G. G., and LIPCHINA, L. P., Institute of Chemical Physics, Academy of Sciences USSR, Moscow

"Alteration of the Lethal Irradiation Effect by Means of Chemical Compounds Under Conditions of Cell-Culturing Outside an Organism"

Moscow, Doklady Akademii Nauk SSSR, Vol 192, No 6, Jun 70, pp 1,367-1,370

Abstract: The possibility of modifying cellular radiosensitivity in tissue culture by means of an inhibitor of radical reactions -- propyl gallate -- was investigated. LL cells were obtained from NK1 mice, and seven-day monodisperse cell cultures were used. Irradiation was conducted 18 hrs after inoculation of media. PG was added 18 hrs and 15 min prior to irradiation. After 10 days of culturing, cells were stained with toluidine blue and counted. It was determined that identical doses of GP had different effects on the cells, depending on the time of contact prior to irradiation. Contact of 18 hrs resulted in increased radiosensitivity of the experimental cell population and a higher kill ratio, whereas 15 min of exposure resulted in radio-protective action. It was assumed that the metabolic products of PG were important in the sensitization effect. During short exposure, a reaction took place between PG and the radicals formed during irradiation, resulting in their deactivation.

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Public Health, Hygiene and Sanitation

USSR

UDC 614.824

LIPEN', A. V., Candidate of Medical Sciences

"Special Aspects of Medical Care in Areas Under Chemical Attack"

Minsk, Zdravookhraneniye Belorussii, No 8, 1971, pp 60-62

Abstract: Chemical agents (mustard, sarin, and V-agents), manufactured in some countries, may be used in another war, and therefore every district in the Soviet Union should have a medical corps and a citizen brigade well trained in therapeutic and prophylactic measures against chemical warfare. Since the above-mentioned gases act quickly in small doses and have a cumulative effect, speed is as important as accuracy. Procedures which may be used include: stocking antidote drugs and other medical supplies and detoxification equipment and protective suits, setting up special units in hospitals for gas victims, organizing rapid transportation of victims and evacuation of other persons, and training the local population in self-defense, training the citizen brigade in detoxification methods, and the medical corps in the medical treatment to be administered.

1/1

1/2 020 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--NEUTRON DIFFRACTION STUDY OF AN ALUMINUM AND LITHIUM ALLOY -U-
AUTHOR--(04)-NOZIK, YU.Z., LIPIN, YU.V., MAKSIMYUK, P.A., MIKHALKO, V.D.
COUNTRY OF INFO--USSR
SOURCE--LATV. PSR ZINAT. AKAD. VESTIS, FIZ. ZINAT. SER. 1970, (1), 88-90
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--LITHIUM ALLOY, ALUMINUM ALLOY, MODEL, CRYSTAL STRUCTURE
ANALYSIS, NEUTRON DIFFRACTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1988/0609 STEP NO--UR/0371/70/000/001/0088/0090
CIRC ACCESSION NO--AP0105592
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0105592

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN AL-LI ALLOY CONTG. 4 WT. PERCENT LI (AL SUBO TIMES 84 LI SUB O TIMES 16) WAS INVESTIGATED BY NEUTRON DIFFRACTION AND SHOWED, BESIDES THE BASIC LINES CORRESPONDING TO THE PURE AL STRUCTURE, 2 SUPERSTRUCTURE LINES, (100) AND (110), CORRESPONDING TO THE LI ATOMS. THE INTERPRETATION OF THE (100) AND (110) PEAKS LEADS TO 2 MODELS OF LI AT. ARRANGEMENT IN THE AL STRUCTURE: AN OCTAHEDRAL MODEL WITH 111 OVER 222 COORDINATES AND A TETRAHEDRAL MODEL WITH 111 OVER 444 COORDINATES. THE LI ATOMS OCCUPY THE OCTAHEDRAL POSITIONS IN THE FCC. LATTICE OF AL. THE INSUFFICIENT SHARPNESS OF THE (100) AND (110) PEAK INTENSITIES, DUE TO THE SMALL AMT. OF LI IN THE ALLOY, DOES NOT ALLOW THE AMT. OF LI IN THE OCTAHEDRAL POSITION TO BE CALCD., AND THUS, NO INFORMATION ON THE SUBSTITUTION OF LI ATOMS IN THE AL STRUCTURE COULD BE OBTAINED.

UNCLASSIFIED

1/2 024 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--NEUTRON DIFFRACTION STUDY OF CA SUB3 FE SUB3.5 V SUB1.5 O SUB12
FERRITE GARNET -J-
AUTHOR--(03)-DUKHOVSKAYA, E.L., LILIN, YU.V., MOZIK, YU.Z.
COUNTRY OF INFO--USSR
SOURCE--LATV. PSR ZINAT. AKAD. VESTIS, FIZ. TEN. ZINAT. SER. 1970, (2),
124-6
DATE PUBLISHED-----70
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--NEUTRON DIFFRACTION, GARNET, FERRITE, VANADIUM, ION
DISTRIBUTION, MAGNETIZATION, CRYSTAL LATTICE STRUCTURE, TEMPERATURE
DEPENDENCE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/1265 STEP NO--UR/0371/70/000/002/0124/0126
CIRC ACCESSION NO--AP0136671
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--04DEC70

2/2 024

CIRC ACCESSION NO--AP0136671
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. NEUTRON DIFFRACTION WAS USED TO SHOW THAT IN THIS FERRITE GARNET, THE IONS OF V ARE STATISTICALLY DISTRIBUTED OVER TETRAHEDRAL SITES, AND THE PARAMETERS OF THE O IONS DIFFER FROM THOSE IN Y SUB3 F SUB5 O SUB12. MEASURED WERE THE PARTIAL MAGNETIZATION FACTORS FOR OCTAHEDRAL AND TETRAHEDRAL SUBLATTICES AT ROOM TEMP. AND THE TEMP. DEPENDENCE OF THE MAGNETIC CONSTITUENT OF THE (220) REFLECTION FROM MINUS 120DEGREES TO THE CURIE POINT. FACILITY: INST. FIZ., RIGA, USSR.

UNCLASSIFIED

AA0046425

UR 0482

Soviet Inventions Illustrated / Section III Mechanical and General,
Derwent, 1-70

240905 LIQUID FUEL BURNER increases the scope of output control and ensures complete burning of fuel with excess air bearing stoichiometric. The burner is mounted inside a hot air box 1 and consists of a fuel nozzle 2 and an air feed with outer 3 and inner 4 concentric cones. The outer cone can move in guides 5. Part of air flows smoothly through the space between the cones and other air goes through the twisting blades 6 fitted to the inner cone and is mixed with the fuel. The blades blanking plate 7 is moved together with on outer cone by a

transmission 8 and 9 which is operated by the boiler controls.

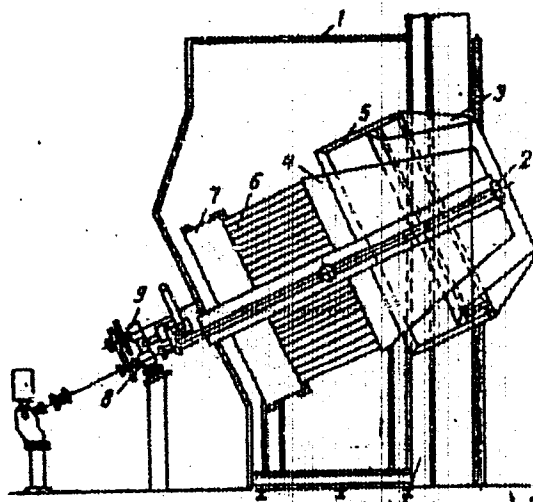
7.4.64 as 892222/24-6.F.A.LIPINSKY (14.8.69) Bul
13/1.4.69. Class 24b. Int.Cl.F 23d.

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USSR

UDC 546.791.6*21'131-386

FOMIN, V. V., LIPIS, L. V., AVERBAKH, L. I., MAYOROVA, Ye. P., and LEMAN, G. A.

"Uranyl Chloride Solvation With Tributylphosphate"

Moscow, Zhurnal Neorganicheskoy Khimii, Vol 16, No 3, Mar 71, pp 772-775

Abstract: A study of the system UO_2Cl_2 -tributylphosphate (TBP) was carried out, concentrating on the effect of the solvent. The system was studied by the cryoscopical method, the distribution method, and spectroscopically. Extraction of UO_2Cl_2 with the mixture of TBP and CCl_4 + dichloroethane or heptane gave a pure compound $UO_2Cl_2 \cdot 2TBP$, supporting the contention that disolvates form under conditions studied. The spectrum of $UO_2Cl_2 \cdot 2TBP$ depended strongly on the solvent used in spectral analysis, but there were no indications that solvates other than the disolvate were formed. Cryoscopical determinations showed that only the disolvates exist in the system UO_2Cl_2 - $2TBP$ -TBP.

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USSR

UDC 577.1:615.7/9

LIPKAN, G. N., and PETRENKO, V. S.

"Choice of Solvent in Primary Toxicological Evaluation of Chemical Substances"

Fiziol. aktivn. veshchestva. Resp. mezhved. sb. (Physiologically Active Substances. Republic Interdepartmental Collection), 1972, No 4, pp 125-129 (from RZh-Biologicheskaya Khimiya, No 4, Feb 73, Abstract No 4 F1912)

Abstract: The toxicity of various organic solvents - acetone, methyl and ethyl alcohols, ethylene and propylene glycols - was studied in mice injected with these substances intraperitoneally and subcutaneously. The calculated LD₅₀ are the basis of recommended amounts of the solvents that do not have toxic action and that can be used in primary toxicological studies on chemical compounds.

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USSR

UDC 517.1:615.7/9

MARCHUK, R. YA., LIPKAN, G. N., ZAIKA, A. P., KONDRATYUK, V. I. and IVANOVA, ZH. N.

"Detoxification and Anticholinesterase Action of Two Representatives of Acid Fluorides of Alkyl Esters of Alkylthiophosphonic Acid"

Fiziol. aktivn. veshchestva. Resp. mezhved. sb. (Physiologically Active Substances, Republic Interdepartmental Collection), 1971, vyp 3, pp 75-79 (from RZh-Biologicheskaya Khimiya, No 17, Sep 71, Abstract No 17F2100)

Translation: In experiments on rabbits it is shown that there is no direct relationship between toxicity, anticholinesterase activity and detoxification in the tissues for isopropyl and ethyl ethers of methylfluorothio-phosphonic acid.

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USSR

UDC 577.1:615.7/9

LIPKAN, G. N.

"Effect of Unithiole on Enzymatic Activity of Myosin and Myosin-Like Proteins and Their Sulfhydryl Groups After Exposure to Metals Such As Thiol Reagents"

Farmakol. i toksikologiya. Resp. mezhved. sb. (Pharmacology and Toxicology. Republic Interdepartmental Collection of Works), 1970, No 5, pp 192-197 (from RZh-Biologicheskaya Khimiya, No 19, 10 Oct 70, Abstract No 19 F1822 by A. Ignat'yev)

Translation: The results of experiments designed to study the effect of unithiole (an antidote used in arsenic and mercury poisonings) on the enzymatic properties of myosin-like proteins in the liver following administration of Cd and Hg suggest that the cholinesterase of these proteins, like myosin cholinesterase, is an enzyme of non-thiol nature. Further research is needed to elucidate the role of SH-groups in the manifestation of cholinesterase activity of these proteins.

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USSR

UDC 621.314.572

AGIBALOV, V. I., DOLGOV, A. M., LIPKIN, A. A.

"A Buffer Memory Device"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztzy, tovarnyye znaki, No 3, Jan 71, Author's Certificate No 291194, Division G, filed 12 May 69, published 6 Jan 71, p 118

Translation: This Author's Certificate introduces a buffer memory device which contains a binary counter and a storage cell. As a distinguishing feature of the patent, the device is simplified by connecting the counter output to an input of the storage cell, the other input of the cell being connected to an auxiliary pulse source of permissible frequency. The output of the storage cell is connected to the output of the device and to a feedback circuit. The output of the device and the feedback circuit are connected to the inputs of all digital places of the counter.

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1/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--KINETICS OF THE REACTION OF N BUTYL N PRIME, N PRIME,
DIBUTYLTHIOUREA WITH OZONE -U-
AUTHOR-(04)-LIPKIN, A.M., RAZUMOVSKIY, S.D., GRIMBERG, A.YE., GURYICH,
YA.A.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 192(1), 127-30
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CHEMICAL REACTION KINETICS, OZONE, CONDENSATION REACTION,
THIOUREA
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/1878 STEP NO--UR/0020/70/192/001/0127/0130
CIRC ACCESSION NO--AT0132140
UNCLASSIFIED

2/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70
 CIRC ACCESSION NO--AT0132140
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. KINETIC DATA WERE PRESENTED FOR
 THE REACTION OF O SUB3 WITH TRIBUTYLTHIOUREA (I). THIS (BROWN OIL), N
 PRIME20 SUBD 1.5147, D PRIME20 0.965, WAS PREPD. BY CONDENSATION OF BUNH
 SUB2 AND BU SUB2 NH WITH CS SUB2 IN H SUB2 O IN THE COLD, FOLLOWED BY
 ELIMINATION OF H SUB2 S BY HEATING; BY HEATING NA BUTYLOITHIOCARBAMATE
 WITH BU SUB2 NH.HCL; OR BY REACTION BY BUNCO WITH BU SUB2 NH. THE TITLE
 REACTION WAS FOLLOWED SPECTROSCOPICALLY. THE RESULTS, SHOWN
 GRAPHICALLY, SUGGEST THAT THE PROTECTIVE ACTION OF I AS AN ANTIOXIDANT
 APPEAR STRONGER IN THE EARLY STAGES OF THE REACTION, DURING WHICH A
 VOLATILE PRODUCT IS FORMED, ALONG WITH TRIBUTYLUREA. EVIDENTLY THE
 REACTION SEQUENCE IS: I PLUS O SUB3 YIELDS BUNHCONBU SUB2 PLUS SO SUB2;
 FOLLOWED BY REACTION OF THIS WITH O TO FORM BUNCO AND OTHER
 (UNIDENTIFIED) PRODUCTS. THE 1ST STEP HAS A HIGH REACTION RATE, WHICH
 COULD NOT BE MEASURED DIRECTLY. FACILITY: INST. KHIM. FIZ.,
 MOSCOW, USSR.

UNCLASSIFIED

1/2 012 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--SYNTHESIS BASED ON 2-METHYL-4-QUINOLINECARBOXYLIC ACID -U-
AUTHOR--LIPKIN, A.YE., BESPALOVA, ZH.P.
COUNTRY OF INFO--USSR
SOURCE--KHIM. FARM. ZH. 1970, 4(1), 24-6
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CHEMICAL SYNTHESIS, QUINOLINE, AROMATIC CARBOXYLIC ACID,
CANCER DRUG, ESCHERICHIA COLI, SHIGELLA, AROMATIC NITRO COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1984/1708

STEP NO--UR/0450/70/004/001/0024/0026

CIRC ACCESSION NO--AP0100305

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--11SEP70

2/2 012
CIRC ACCESSION NO--AP0100305

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SERIES OF POTENTIAL ANTICARCINOGENS WAS PREPD. BY TREATING 0.01 MOLE 2-METHYL 4-QUINOLINECARBOXYLIC ACID (M. 243-5DEGREES) WITH 0.01 MOLE ALDEHYDE IN 10 ML AC SUB2 O, AND HEATING THE MIXT. 30 MIN AT 180-90DEGREES. THUS WERE PREPD. I (R AND M.P. GIVEN): PH (IA), 289-90DEGREES; O-NITROPHENYL (II), 293-4DEGREES; M-NITROPHENYL (III), 316-17DEGREES; P-NITROPHENYL (IV), 324-5DEGREES; 2-FURYL, 196-8DEGREES; 5-NITRO, 2-FURYL, 297-8DEGREES; 2-THIENYL, 292-3DEGREES; 5-NITRO, 2-THIENYL, 296DEGREES. WHEN TESTED AGAINST INTESTINAL MICROBES, II AND III WERE INACTIVE AND IV ONLY SLIGHTLY ACTIVE. IA WAS ACTIVE AGAINST CANDIDA ALBICANS, [ESCHERICHIA] COLI AND SHIGELLA SONNEI.

UNCLASSIFIED

USSR

UDC 616.935-078

LIPKIN, M. Ye., Candidate of Medical Sciences, L'vov

"Specific Laboratory Methods for Dysentery Diagnosis"

Moscow, Sovetskaya Meditsina, Vol 33, No 7, Jul 70, pp 52-57

Abstract: Various tests for use in the diagnosis of dysentery are listed, their relative significance is discussed, and the sequence in which they are to be performed is outlined. It is noted, however, that there is no specific, absolutely reliable test for dysentery. Among the tests described are: fermentation of sugars by the bacteria, formation of indoles, acid-base reactions, selection of media for bacterial cultures, mobility of cultures and their growth patterns, the use of specific and group antigens, presence of K- and L- antigens, cross agglutination, passive hemagglutination, increase in phage titer, and the immunofluorescence method.

USSR

UDC 539.3:534.1

LIPKIN, V. I.

"Experimental Studies of Natural Frequencies and Critical Loads for Rectangular Plates With Rectangular Openings Under Hydrostatic Stress"

V sb. Issled. po stroit. konstruktsiyam (Studies in Structural Designs -- Collection of works), Tomsk, Tomsk University, 1972, pp 149-156 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V239)

Translation: The results of an experimental study of the natural frequencies and critical loads for rectangular plates with a rectangular opening constrained over the entire contour are presented. Particular attention was given in the experiment to the central application of the load. The results are compared with theoretical results obtained previously by the author.

7 ref. N. A. Kulakov.

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USSR

UDC 539.3

LIPKIN, V. I.

"Calculation of Rectangular Plates With Rigidity Varying in Stages for Strength, Stability, and Vibrations"

V sb. Prostranstv. konstruktsii v Krasnoyarsk. kraye (Three-Dimensional Structures in the Krasnoyarsk Region -- Collection of Works), Krasnoyarsk, 1972, pp 256-257 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V188)

Translation: The use of impulse functions are proposed in problems of calculating plates with rigidity varying in stages that formally lead to the problem of plastics with continuously varying rigidity to which variational methods in the ordinary form are applicable. As compared with other methods, the Ritz method is more suitable for computer use. It is pointed out that programs are compiled and problems of strength under bending, of stability and vibrations of rectangular plates with openings were solved. A fundamental system of beam functions is taken as the system of approximating functions. An experimental test of a series of plates supported the applicability of the proposed technique. Yu. A. Gruzdev.

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1/2 011
UNCLASSIFIED
TITLE--TENTH EUROPEAN SYMPOSIUM ON THE CHEMISTRY OF THE PEPTIDES -U-
PROCESSING DATE--13NOV70
AUTHOR--(02)-LIPKIN, V.M., YEVSTRATOV, A.V.
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, VESTNIK AKADEMII NAUK SSSR, RUSSIAN, VOL 40, NO 1, JANUARY
1970, PP 97-88
DATE PUBLISHED-----70
SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES, BIOLOGICAL AND MEDICAL
SCIENCES
TOPIC TAGS--PEPTIDE, AMINO ACID, APPLIED CHEMISTRY CONFERENCE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3003/0976
STEP NO--UR/0030/70/C40/001/0087/0088
CIRC ACCESSION NO--AP0130025
UNCLASSIFIED

2/2 011

CIRC ACCESSION NO--AP0130025
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--13NOV70

ABSTRACT. THE TENTH EUROPEAN SYMPOSIUM ON THE CHEMISTRY OF THE PEPTIDES WAS HELD ON 7-13 SEPTEMBER 1969 IN ABANO TERMA, ITALY. ABOUT 120 SCIENTISTS FROM 18 COUNTRIES PARTICIPATED IN ITS WORK. ACCORDING TO THE ESTABLISHED TRADITION THE FIRST SECTION OF THE PROGRAM WAS DEVOTED TO PROBLEMS OF PROTECTIVE GROUPS AND THE FORMATION OF THE PEPTIDE BOND. ALTHOUGH IN THAT AREA NOTHING NEW IN PRINCIPLE HAD APPEARED SINCE THE PRECEDING SYMPOSIUM, A NUMBER OF REPORTS WERE OF DEFINITE INTEREST. THERE WERE REPORTS ON THE USE FOR THE PROTECTION OF THE AMINO GROUPS OF AMINO ACIDS AND PEPTIDES OF A NITROVERATRYLOXY GROUP, WHICH BE SELECTIVELY BE REMOVED IN THE PRESENCE OF BENZYLOXYCARBONYL AND TERT BUTYLOXYCARBONYL PROTECTIVE GROUPS DURING IRRADIATION OF THE PEPTIDE WITH LIGHT (M. FRIEDKIN, ISRAEL), AND ALSO ON A NEW THIO TERT BUTYL S PROTECTIVE GROUP FOR CYSTEINE (E. BUNSCH, WEST GERMANY) AND A METHOD OF OBTAINING α -PHthaloylamino ACIDS, BASED ON THE INTERACTION OF AMINO ACID ESTERS WITH O-METHYLOXYCARBONYLBENZOYLCHLORIDE (G. BEYERMAN, HOLLAND).

UNCLASSIFIED

USSR

LIPKIN, V. I.

UDC 539.3

"On the Problem of the Experimental Study of Plates With an Opening for Bending"

V sb. Issled. po stroit. konstruktsiyam (Studies on Structures -- Collection of Works), Tomsk, Tomsk University, 1972, pp 144-148 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V187)

Translation: Deformations and bends of a rectangular plate hinge-fastened along the outer contour with a rectangular opening and loaded by a uniform pressure were determined experimentally. The results were compared with theoretical results. The poor convergence of the theoretical method in the vicinity of the opening is pointed out. N. A. Kulakov.

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USSR

UDC 621.357.8.035.4:669.14(088.8)

SHTAN'KO, V. M., LIPKIN, Ya. N., NOVIKOV, V. G., VOLKOV, Yu. M., STRIZHAK, G. K., RABINOVICH, O. Ya., ZIMOVETS, V. G., DANILOV, A. M., MATVEYEV, Yu. M., MEDNIKOV, Yu. A.

"Electrolyte for Electrochemical Polishing of Products"

USSR Author's Certificate No 306186, Filed 28/10/69, Published 21/07/71,
(Translated from Referativnyy Zhurnal, Khimiya, No 3, 1972, Abstract No
3 L283 P from the Resume).

Translation: An electrolyte for electrochemical polishing of products, for example of stainless steel, differing in that in order to improve the quality of polishing and intensify the process, a foam suppressor is introduced to the electrolyte with the following relationship of components (in wt.%): orthophosphoric acid 30-70, H_2SO_4 10-40, H_2O 10-30 and above 100%. Surfactants based on peptide and polypeptide salts, 1-10 g/l, foam suppressor 0.001-1 g/l. Polymethylsiloxane liquid is used as the foam suppressor.

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UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--A COMPARATIVE STUDY OF THE CELL TISSUE RESPOND TO THE EFFECT OF
ANTIBIOTICS AND THEIR COMBINATIONS -U-

AUTHOR--LIPKINA, G.S.

COUNTRY OF INFO--USSR

SOURCE--ANTIBIOTIKI, 1970, VOL 15, NR 5, PP 449-455

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TISSUE CULTURE, CYTOLOGY, TETRACYCLINE, KANAMYCIN,
LEVOMYCETIN, OLEANDOMYCIN/AMPICILLIN ANTIBIOTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1994/0145

STEP NO--UR/0297/70/015/005/0449/0455

CIRC ACCESSION NO--AP0114541

UNCLASSIFIED

010
CIRC ACCESSION NO--AP0114541
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--16OCT70

ABSTRACT. OUT OF 6 ANTIBIOTICS STUDIED, I. E. AMPICILLIN, KANAMYCIN, LINCOMYCIN, OLEANDOMYCIN, LEVOMYCETIN (CHLORAMPHENICOL) AND TETRACYCLINE, THE LATTER TWO WERE MOST TOXIC FOR TISSUE CELL CULTURES. THE MAXIMUM DOSE OF TETRACYCLINE PRODUCING NO CHANGES IN THE CELL STATE (IN 24 HOURS AFTER THE ANTIBIOTIC ADDITION TO THE MEDIUM) WAS 62 MUG-ML AND THAT OF LEVOMYCETIN WAS 125 MUG-ML. TETRACYCLINE COMBINATIONS WITH LEVOMYCETIN PRODUCED MORE SIGNIFICANT CHANGES IN THE CELL STATE THAN EACH ANTIBIOTIC USED ALONE (IN DOSES USED IN COMBINATIONS). THE USE OF TETRACYCLINE IN COMBINATION WITH LINCOMYCIN OR OLEANDOMYCIN DID NOT RESULT IN AN INCREASE OF ITS TOXICITY. COMBINATION OF KANAMYCIN WITH AMPICILLIN EVEN IN A VERY HIGH SUMMATION DOSE OF 1000 MUG-ML (500 MUG-ML OF EVERY ANTIBIOTIC) HAD NO IRRITATING EFFECT ON THE CELLS (WITH RESPECT TO THE CRITERIA USED).
FACILITY: CENTRAL POST GRADUATE MEDICAL INSTITUTE, MOSCOW.

UNCLASSIFIED

1/2 012
UNCLASSIFIED
PROCESSING DATE--0200170
TITLE--REGULARITIES IN THE STRENGTH DECREASE OF ZEOLITE PELLETS UNDER
ACTION OF WATER AND BENZENE VAPORS -U-
AUTHOR--(05)-SLEPNEVA, A.T., LIPKIND, B.A., DUKAREVICH, M.V., KONTOROVICH,
S.I., SHCHURIN, YE.D.
COUNTRY OF INFO--USSR
SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 2, PP 251-254
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ZEOLITE, WATER, BENZENE, ADSORPTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PRUXY REEL/FRAE--1992/1553
STEP NO--UR/0069/70/032/002/0251/0254
CIRC ACCESSION NO--AP0112547
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--02 OCT 70

CIRC ACCESSION NO--AP0112547

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF MOISTENING BY WATER AND BENZENE VAPORS ON THE STRENGTH OF THE SAMPLES OF KAOLINITE CLAY AND ZEOLITES NAA AND NAX, CONTAINING 20PERCENT CLAY AS BINDING AGENT, HAS BEEN STUDIED. MOISTENING OF CLAY AND ZEOLITE SAMPLES INVOLVES A STRENGTH DECREASE ASSOCIATED WITH THE LOWERING OF THE FREE SURFACE ENERGY DURING ADSORPTION. THE SORPTION OF WATER AND BENZENE MOLECULES BY INTERNAL CAVITIES OF ZEOLITE CRYSTALS REDUCES THE STRENGTH DECREASE IF THE LIQUID CONTENT DOES NOT EXCEED 10-20PERCENT OF THE ADSORPTION CAPACITY OF ZEOLITES.

UNCLASSIFIED

1/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--THEORETICAL STUDY OF N,ACETYL,L,ALANINE METHYLAMIDE CONFORMATIONS
IN VARIOUS MEDIA -U-
AUTHOR-(03)-LIPKIND, G.M., ARKHIPOVA, S.F., POPOV, YE.M.
COUNTRY OF INFO--USSR
SOURCE--ZH. STRUKT. KHIM. 1970, 11(1), 121-6 (RUSS)
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ALANINE, ANIDE, HYDROGEN BONDING, ENTROPY, DIPOLE MOMENT,
SOLVENT ACTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/1643 STEP NO--UR/0192/70/011/001/0121/0126
CIRC ACCESSION NO--AP0125265
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--13NOV70

2/2 019

CIRC ACCESSION NO--AP0125265

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ENERGY MAPS WERE CONSTRUCTED MATH., CORRESPONDING TO THE VARIOUS EXTENDED AND COILED CONFORMATIONS POSSIBLE IN N,ACETYL,L,ALANINE METHYLAMIDE FOR SOLVENT SYSTEMS OF DIFFERENT DIELEC. CONSTS., BASED ON ESTD. STRENGTHS OF THE H BONDS IN SUCH MEDIA. THE DIPOLE MOMENTS WERE CALCD. FOR THE VARIOUS CONFORMATIONS AND THE ENTROPY IMPLICATIONS OF THE ENERGY MAPS ARE DISCUSSED. FACILITY: INST. KHIM. PRIR. SODIN., MOSCOW, USSR.

UNCLASSIFIED

1/2 006 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--THEORETICAL STUDY OF CONFORMATIONS OF N-ACETYL-L-PHENYLALANINE
METHYLAMIDE -U-
AUTHOR--(03) LIPKIND, G.M., ARKHIPOVA, S.F., POPOV, YE.M.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (2), 315-22
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PHENYLALANINE, AMIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/0750 STEP NO--UR/0062/70/000/002/0315/0322
CIRC ACCESSION NO--AP0124420
UNCLASSIFIED

2/2 006

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124420
ABSTRACT/EXTRACT--(U) GP-O-

ABSTRACT. CONFORMATIONAL ANAL. WAS MADE FOR
N,ACETYL,L,PHENYLALANINE METHYLAMIDE AND THE MOL. MAP PROJECTIONS WERE
PRESENTED AND DISCUSSED.

FACILITY: INST. KHIM. PRIR. SOEDIN.,

MOSCOW, USSR.

UNCLASSIFIED

1/2 008 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--THEORETICAL ANALYSIS OF CONFORMATIONS OF SOME METHYLAMIDES OF N
ACETYLDIPEPTIDES -U-
AUTHOR--(03)-LIPKIND, G.M., ARKHIPOVA, S.F., POPOV, YE.M.
COUNTRY OF INFO--USSR
SOURCE--MOLEKULYARNAYA BIOLOGIYA, 1970, VOL 4, NR 3, PP 331-338
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY
TOPIC TAGS--PEPTIDE, MOLECULAR STRUCTURE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1998/0177 STEP NO--UK/0463/70/004/003/0331/0338
CIRC ACCESSION NO--AP0120877
UNCLASSIFIED